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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,266	06/19/2001	Yukihiro Matsumoto	41928	9419

1609 7590 10/15/2002

ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P.
1300 19TH STREET, N.W.
SUITE 600
WASHINGTON,, DC 20036

EXAMINER

ZALUKAEVA, TATYANA

ART UNIT PAPER NUMBER

1713

DATE MAILED: 10/15/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/883,266

Applicant(s)

MATSUMOTO ET AL.

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5, 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112; second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The transitional word (i.e. between the preamble and the body of claim) "characterized and phrases incorporating it are common in applications of European origin. IN U.S. practice claims containing those words and phrases are rejectable under 35 USC 112.2 when characterization may connote more than mere description (dictionary definition); in scientific parlance characterization may imply one or more physical steps or procedures (e.g. structure determination, elemental analysis, or qualitative tests) to identify a product. Since it is rare that applicant intends more than a mere description when using this language, physical steps are rarely disclosed. As such the reader may be unsure about the meaning of the wording of the claims, and additionally the scope of the claim is often unclear ("characterized conveys no degree of openness). Usually these troublesome words or phrases can be replaced by the standard transitional words, "having", "comprising", "wherein" and the like.

The recited "neutralization ratio of acrylic acid ... more than 100 mol. %", as per claim 4 constitute an indefinite subject matter, because it is not readily ascertainable as

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to how more than 100% of carboxyl groups can be neutralized. Correction and/or clarification is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimaru et al (U.S. 6,444,744B1).

Fujimaru discloses a water absorbent resin and a method of making such resin. One of the possible options to produce a resin is polymerizing a monomer component containing a major proportion of acrylic acid and/or or salt which has a content of hydroquinone or benzoquinone less than 0.20 ppm. (abstract). According to Fujimaru the acrylic acid used in his process is one that industrially produced by a propylene gas phase oxidation process (col. 4, lines 7-11, col. 9, lines 19-40). In a finally purified acrylic acid the amount of hydroquinone is 0.5-1ppm (col. 9, lines 50-56). One of the advantages of Fujimaru is that the water absorbent resin is produced from acrylic acid having reduced hydroquinone content, of at most 0.2 ppm (paragraph bridging col. 5 and 6, col. 5, lines 12-17), a hydrophilic water absorbent resin is produced by aqueous

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solution polymerization (col. 6, lines 18-21); a water absorbent rein is at least partially neutralized (col. 6, lines 31-33); a resin of which the surface neighborhood of the particles are crosslinked is taught by Fujimaru in col. 6, lines 67-67. Fujimaru further teaches that examples of his rein include polyacrylic acids or neutralized polyacrylic acids, neutralized by 50-95 mol. % (col. 11, lines 20-30). Neutralization may be carried out before, during or after polymerization (col. 3, lines 35-40). The alkaline substances used for neutralization include Na, Li, K hydroxides (col. 12, lines 10-15). The polymerization temperature is preferably within the range of 20-90°C. (col. 13, lines 33-35). The water absorbent capacity of the resin according to Fujimaru is preferably at least 30 g/g under a heavy load of 50 g/cm² (col. 20, lines 25-30).

Therefore all the limitations of the instant claims 1, 3-9 are expressly met by Fujimaru.

With regard to the limitation of the instant claim 2, which is concerned with the amount of furfural impurity in the starting acrylic acid, it will inherently be within the claimed range because the starting acrylic acid of Fujimaru is identical is obtained by the process identical to the instantly claimed. When the claimed compound is not novel, it is not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art. In re Spada, 911 F 2d 705, 709 15 USPQ 1655, 1658 (Fed. Cir. 1990).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yanase (U.S. 6,187,872) discloses a method of making water absorbent rein from crosslinked and neutralized acrylic acid; Ishizaki et al (U.S.

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5,981,070) discloses a method of manufacturing water absorbent powders; Dairoku et al (U.S. 6,071,976) discloses a method of manufacturing water absorbent compounds and articles obtained from them.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (703) 308-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

TATYANA ZALUKAEVA
PATENT EXAMINER



October 8, 2002

Tatyana Zalukaeva
Examiner
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